CLAIMS

1. A polypeptide, which polypeptide:

(i) comprises or consists of the amino acid sequence as recited in SEQ ID NO:2;

(ii) is a fragment thereof that is an interferon gamma-like secreted protein of the four helical bundle cytokine fold, or having an antigenic determinant in common with the polypeptides of (i); or

(iii) is a functional equivalent of (i) or (ii).

2. A polypeptide according to claim 1 which functions as an interferon gamma-like secreted protein of the four helical bundle cytokine fold.

3. A polypeptide which is a functional equivalent according to part (iii) of claim 1, is homologous to the amino acid sequence as recited in SEQ ID NO:2 and is an interferon gamma-like secreted protein of the four helical bundle cytokine fold.

4. A fragment or functional equivalent according to claim 1, which has greater than 80% sequence identity with the amino acid sequence recited in SEQ ID NO:2 or with active fragments thereof.

5. The fragment or functional equivalent of claim 4, wherein there is greater than 90% sequence identity.

6. The fragment or functional equivalent of claim 4, wherein there is greater than 95% sequence identity.

7. The fragment or functional equivalent of claim 4, wherein there is greater than 98% sequence identity.

8. The fragment or functional equivalent of claim 4, wherein there is greater than 99% sequence identity.

9. A functional equivalent according to claim 1, which exhibits significant structural homology with a polypeptide having the amino acid sequence given in SEQ ID NO:2.

10. A fragment as recited in claim 1 having an antigenic determinant in common with a polypeptide of part (i) of claim 1 which consists of 7 or more amino acid residues from the sequence of SEQ ID NO:2.

11. A purified nucleic acid molecule which encodes a polypeptide according to claim 1.

12. A purified nucleic acid molecule according to claim 11, which has the nucleic acid sequence as recited in SEQ ID NO:1 or is a redundant equivalent or fragment thereof.

13. A purified nucleic acid molecule which hybridizes under high stringency conditions with a nucleic acid molecule according to claim 11.

14. A vector comprising a nucleic acid molecule as recited in claim 11.

15. A host cell transformed with a vector according to claim 14.

16. A ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide according to claim 1.

17. A ligand according to claim 16, which is an antibody.

18. A compound that either increases or decreases the level of expression or activity of a polypeptide according to claim 1.

19. A compound according to claim 18 that binds to the polypeptide without inducing any of the biological effects of the polypeptide.

20. A compound according to claim 18, which is a natural or modified substrate, ligand, enzyme, receptor or structural or functional mimetic.

21. A polypeptide according to claim 1, a nucleic acid molecule which encodes a polypeptide according to claim 1, a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a host cell transformed with a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide according to claim 1, or a compound that either increases or decreases the level of expression or activity of a polypeptide according to claim 1, for use in therapy or diagnosis of disease.

22. A method of diagnosing a disease in a patient, comprising assessing the level of expression of a natural gene encoding a polypeptide according to claim 1, or assessing the activity of a polypeptide according to claim 1, in tissue from said patient and comparing said level of expression or activity to a control level, wherein a level

that is different to said control level is indicative of disease.

23. A method according to claim 22 that is carried out *in vitro*.

24. A method according to claim 22, which comprises the steps of:

(a) contacting a ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide, wherein the polypeptide

(i) comprises or consists of the amino acid sequence as recited in SEQ ID NO:2;

(ii) is a fragment thereof that is an interferon gamma-like secreted protein of the four helical bundle cytokine fold, or having an antigenic determinant in common with the polypeptides of (i); or

(iii) is a functional equivalent of (i) or (ii);

with a biological sample under conditions suitable for the formation of a ligand-polypeptide complex; and

(b) detecting said complex.

25. A method according to claim 22, comprising the steps of:

a) contacting a sample of tissue from the patient with a nucleic acid probe under stringent conditions that allow the formation of a hybrid complex between a nucleic acid molecule which encodes a polypeptide, wherein the polypeptide

(i) comprises or consists of the amino acid sequence as recited in SEQ ID NO:2;

(ii) is a fragment thereof that is an interferon gamma-like secreted protein of the four helical bundle cytokine fold, or having an antigenic determinant in common with the polypeptides of (i); or

(iii) is a functional equivalent of (i) or (ii);

and the probe;

b) contacting a control sample with said probe under the same conditions used in step a); and

c) detecting the presence of hybrid complexes in said samples; wherein detection of levels of the hybrid complex in the patient sample that differ from levels of the

hybrid complex in the control sample is indicative of disease.

26. A method according to claim 22, comprising:

a) contacting a sample of nucleic acid from tissue of the patient with a nucleic acid primer under stringent conditions that allow the formation of a hybrid complex between a nucleic acid molecule which encodes a polypeptide, wherein the polypeptide

(i) comprises or consists of the amino acid sequence as recited in SEQ ID NO:2;

(ii) is a fragment thereof that is an interferon gamma-like secreted protein of the four helical bundle cytokine fold, or having an antigenic determinant in common with the polypeptides of (i); or

(iii) is a functional equivalent of (i) or (ii);

and the primer;

b) contacting a control sample with said primer under the same conditions used in step a); and

c) amplifying the sampled nucleic acid; and

d) detecting the level of amplified nucleic acid from both patient and control samples; wherein detection of levels of the amplified nucleic acid in the patient sample that differ significantly from levels of the amplified nucleic acid in the control sample is indicative of disease.

27. A method according to claim 22 comprising:

a) obtaining a tissue sample from a patient being tested for disease;

b) isolating a nucleic acid molecule which encodes a polypeptide, wherein the polypeptide

(i) comprises or consists of the amino acid sequence as recited in SEQ ID NO:2;

(ii) is a fragment thereof that is an interferon gamma-like secreted protein of the four helical bundle cytokine fold, or having an antigenic

determinant in common with the polypeptides of (i); or

(iii) is a functional equivalent of (i) or (ii);

from said tissue sample; and

c) diagnosing the patient for disease by detecting the presence of a mutation which is associated with disease in the nucleic acid molecule as an indication of the disease.

28. The method of claim 27, further comprising amplifying the nucleic acid molecule to form an amplified product and detecting the presence or absence of a mutation in the amplified product.

29. The method of claim 27, wherein the presence or absence of the mutation in the patient is detected by contacting said nucleic acid molecule with a nucleic acid probe that hybridises to said nucleic acid molecule under stringent conditions to form a hybrid double-stranded molecule, the hybrid double-stranded molecule having an unhybridised portion of the nucleic acid probe strand at any portion corresponding to a mutation associated with disease; and detecting the presence or absence of an unhybridised portion of the probe strand as an indication of the presence or absence of a disease-associated mutation.

30. A method according to claim 22, wherein said disease is selected from immune disorders, such as autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas,

lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

31. A method of using a polypeptide according to claim 1 as an interferon gamma-like secreted protein of the four helical bundle cytokine fold.

32. A pharmaceutical composition comprising a polypeptide according to claim 1, a nucleic acid molecule which encodes a polypeptide according to claim 1, a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a host cell transformed with a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide according to claim 1, or a compound that either increases or decreases the level of expression or activity of a polypeptide according to claim 1.

33. A vaccine composition comprising a polypeptide according to claim 1 or a nucleic acid molecule which encodes a polypeptide according to claim 1.

34. A polypeptide according to claim 1, a nucleic acid molecule which encodes a polypeptide according to claim 1, a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a host cell transformed with a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide according to claim 1, or a compound that either increases or decreases the level of expression or activity of a polypeptide according to claim 1, or a pharmaceutical composition comprising one or more of the above, for use in the manufacture of a medicament for the treatment of a disease selected from

immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

35. A method of treating a disease in a patient, comprising administering to the patient a polypeptide according to claim 1, a nucleic acid molecule which encodes a polypeptide according to claim 1, a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a host cell transformed with a vector comprising a nucleic acid molecule which encodes a polypeptide according to claim 1, a ligand which binds specifically to, and which preferably inhibits the interferon gamma-like activity of, a polypeptide according to claim 1, or a compound that either increases or decreases the level of expression or activity of a polypeptide according to

claim 1, or a pharmaceutical composition comprising one or more of the above.

36. A method according to claim 35, wherein, for diseases in which the expression of the natural gene or the activity of the polypeptide is lower in a diseased patient when compared to the level of expression or activity in a healthy patient, the polypeptide, nucleic acid molecule, vector, ligand, compound or composition administered to the patient is an agonist.

37. A method according to claim 35, wherein, for diseases in which the expression of the natural gene or activity of the polypeptide is higher in a diseased patient when compared to the level of expression or activity in a healthy patient, the polypeptide, nucleic acid molecule, vector, ligand, compound or composition administered to the patient is an antagonist.

38. A method of monitoring the therapeutic treatment of disease in a patient, comprising monitoring over a period of time the level of expression or activity of a polypeptide according to claim 1, or the level of expression of a nucleic acid molecule which encodes a polypeptide according to claim 1 in tissue from said patient, wherein altering said level of expression or activity over the period of time towards a control level is indicative of regression of said disease.

39. A method for the identification of a compound that is effective in the treatment and/or diagnosis of disease, comprising contacting a polypeptide according to claim 1, or a nucleic acid molecule which encodes a polypeptide according to claim 1 with one or more compounds suspected of possessing binding affinity for said polypeptide or nucleic acid molecule, and selecting a compound that binds specifically to said nucleic acid molecule or polypeptide.

40. A kit useful for diagnosing disease comprising a first container containing a nucleic acid probe that hybridises under stringent conditions with a nucleic acid molecule which encodes a polypeptide according to claim 1; a second container containing primers useful for amplifying said nucleic acid molecule; and instructions for using the probe and primers for facilitating the diagnosis of disease.

41. The kit of claim 40, further comprising a third container holding an agent for digesting unhybridised RNA.

42. A kit comprising an array of nucleic acid molecules, at least one of which is a nucleic acid molecule which encodes a polypeptide according to claim 1.

43. A kit comprising one or more antibodies that bind to a polypeptide as recited in claim 1; and a reagent useful for the detection of a binding reaction between said antibody and said polypeptide.

44. A transgenic or knockout non-human animal that has been transformed to express higher, lower or absent levels of a polypeptide according to claim 1.

45. A method for screening for a compound effective to treat disease, by contacting a non-human transgenic animal according to claim 44 with a candidate compound and determining the effect of the compound on the disease of the animal.

46. A method according to claims 35, wherein said disease is selected from immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis,

candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

47. A method according to claims 38, wherein said disease is disease selected from immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

48. A method according to claims 39, wherein said disease is selected from immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell

function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

49. A method according to claims 40, wherein said disease is selected from immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing,

type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.

50. A method according to claim 45, wherein said disease is selected from immune disorders, autoimmune disease, rheumatoid arthritis, osteoarthritis, psoriasis, systemic lupus erythematosus, multiple sclerosis, myastenia gravis, Guillain-Barré syndrome, Graves disease, autoimmune alopecia, scleroderma, psoriasis, graft-versus-host disease, monocyte dysfunction, neutrophil dysfunction, attenuated B cell function, inflammatory disorders, acute inflammation, septic shock, asthma, anaphylaxis, eczema, dermatitis, allergy, rhinitis, conjunctivitis, glomerulonephritis, uveitis, Sjogren's disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, pancreatitis, digestive system inflammation, ulcerative colitis, sepsis, endotoxic shock, septic shock, cachexia, myalgia, ankylosing spondylitis, myasthenia gravis, post-viral fatigue syndrome, pulmonary disease, respiratory distress syndrome, asthma, chronic-obstructive pulmonary disease, airway inflammation, wound healing, type I diabetes, type II diabetes, endometriosis, dermatological disease, Behcet's disease, immuno-deficiency disorders, chronic lung disease, aggressive and chronic periodontitis, cancers, carcinomas, sarcomas, lymphomas, renal tumour, colon tumour, Hodgkin's disease, melanomas, metastatic melanomas, mesotheliomas, Burkitt's lymphoma, neuroblastoma, haematological disease, nasopharyngeal carcinomas, leukemias, myelomas, myeloproliferative disorder, other neoplastic diseases, osteoporosis, obesity, diabetes, gout, cardiovascular disorders, reperfusion

injury, atherosclerosis, ischaemic heart disease, cardiac failure, stroke, liver disease, chronic hepatitis, AIDS, AIDS related complex, neurological disorders, fibrotic diseases, male infertility, ageing, infections, plasmodium infection, bacterial infection, fungal diseases, ringworm, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, sporotrichosis, coccidioidocomycosis, paracoccidiomycosis, candidiasis, diseases associated with antimicrobial immunity, Peyronie's disease, tuberculosis, and viral infection.